DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015562
Date Inspected: 09-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: Bonifacio Daquinag, Mike Johnson, Leonard Cross

CWI Present:	☑ Yes ☐ No	
Inspected CWI report:	☑ Yes ☐ No	☐ N/A
Electrode to specification:	☑ Yes ☐ No	☐ N/A
Qualified Welders:	☑ Yes ☐ No	☐ N/A
Approved Drawings:	☑ Yes ☐ No	☐ N/A
Rod Oven in Use:	☑ Yes ☐ No	☐ N/A
Weld Procedures Followed:	☑ Yes ☐ No	☐ N/A
Verified Joint Fit-up:	☑ Yes ☐ No	☐ N/A
Approved WPS:	☑ Yes ☐ No	☐ N/A
Delayed / Cancelled:	☐ Yes ☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

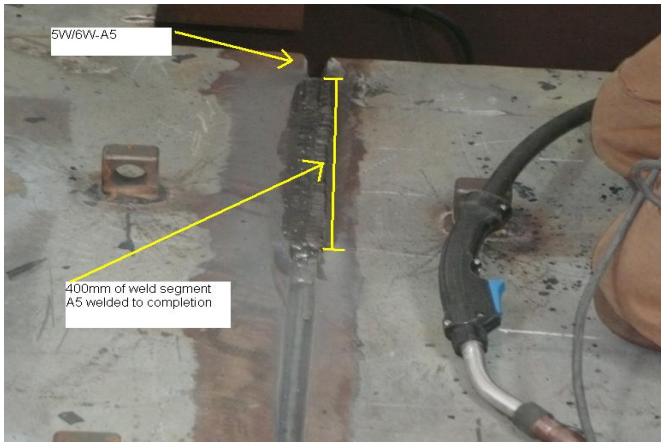
Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 5W/6W, and the following observations were made:

5W/6W-A
A5
Upon the arrival of the QA Inspector in the am it was observed the above identified weld joint was fit up with the approved temporary attachments or fit up gear in place. The QA Inspector randomly observed the weld segment A5 was 90% tack welded with the flux cored arc welding (FCAW) process. The QA Inspector randomly observed the ABF welder identified as James Zhen was performing FCAW upon the arrival of the QA Inspector. The QA Inspector randomly observed the ABF welder was preheating the material with a rose bud torch to the minimum required per the approved WPS. The QA Inspector randomly observed the FCAW-G parameters and they were 230 Amps, 22 volts and a travel speed of 250mm/min. The QA Inspector noted the last 400mm of the weld segment A5 appeared to have been welded to completion in an attempt to alleviate any possible cracking at the ends of the weld joint. The QA Inspector noted no weld tabs of runoff tabs were installed for use on the above identified weld joint (see summary of conversation).

A1
The QA Inspector randomly observed the ABF welder identified as Hua Qiang Hwang was performing FCAW upon the arrival of the QA Inspector. The QA Inspector randomly observed the ABF welder was preheating the material with a rose bud torch to the minimum required per the approved WPS. The QA Inspector randomly

observed the FCAW-G parameters and they were 245 Amps, 21 volts and a travel speed of 250mm/min. The QA Inspector noted the first 400mm of the weld segment A1 appeared to have been welded to completion in an attempt to alleviate any possible cracking at the ends of the weld joint. The QA Inspector noted at the commencement of the tack welding no planar misalignment was noted. Upon the arrival of the QA Inspector, it was observed the first 80mm of the weld segment A1 had unacceptable planar misalignment of approximately 8mm. The QA Inspector noted the temperature of the steel was 65°F at the time of the inspection. The QA Inspector noted the 8mm of planar misalignment was welded to completion upon the arrival of the QA Inspector. The QA Inspector randomly observed and noted the above identified welders spend the remainder of the QA Inspectors shift performing the FCAW/SMAW tack welding.



Summary of Conversations:

The ABF Welding Superintendent Dan Ieraci informed the QA Inspector no runoff tabs or weld tabs were installed due to the previous cracking issues that have occurred at the run off tabs. Mr. Ieraci went on to inform the QA Inspector, he believes performing the FCAW tack weld is the best way to perform that particular welding. Mr. Ieraci elaborated and said the weld segments A1 and A5 will be tack welded with FCAW and the remainder of the weld joint between will be welded utilizing the SMAW process. Mr. Ieraci informed the QA Inspector the FCAW tack welds will be some what of and experiment to determine which tack welding process works the best.

The QA Inspector Danny Reyes informed the QA Inspector that the contract was ready to perform joint inspection to determine the extent of the planar misalignment of the two top deck plate members of 5W/6W-A.(The QA Inspector Rick Bettencourt noted all of the other previous weld joints were inspected for planar misalignment after the full length tack welding had taken place and the two top deck plates were joined by welding). Mr. Reyes informed the QA Inspector he was informed by the SE QC Lead Inspector Leonard Cross, the planar misalignment inspection will now be performed prior to any welding being performed.

The QA Inspector informed the QA Task Lead Bill Levell of the above described issue, Mr. Levell informed the Project Manager Patrick Lowry of the planar misalignment inspection. Mr. Levell later informed the QA Inspector, Mr. Lowry was aware the planar misalignment map would be generated and dimensions taken prior to any weld metal being deposited. Mr. Lowry expressed the need to perform additional dimensional verifications of the weld joint as tacking welding is in progress and after the full length tack welding is completed.

WELDING INSPECTION REPORT

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer